

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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PHOTOHERMOGRAPHIC MATERIAL**DECLARATION UNDER 37 C.F.R. §1.132**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA22313-1450

Sir:

I, Tomoyuki Ohzeki, hereby declare and state:

THAT I am a citizen of Japan;

THAT I have received a Master's Degree in Engineering in March 1988 from
Waseda University, Faculty of Science and Engineering;

THAT I have been employed by Fuji Photo Film Co., Ltd. since April 1988,
where I have been engaged in research and development of silver halide photosensitive
materials and since 1998, photothermographic materials.

The following additional comments and experiments have been declared and conducted by me.

ADDITIONAL EXPERIMENTS

This is a comparative test of 1-phenyl-3-pyrazolidone to a compound having an adsorptive group to silver halide and 3-pyrazolidone group as a reducing group in an image forming layer.

1. Preparation of samples of photothermographic material

Sample Nos. A, B, C and D were prepared as similar to Samples in Example 1 in the present application except that a compound having an adsorptive group and a reducing group or 1-phenyl-3-pyrazolidone were incorporated in an image forming layer as shown in Table A.

Sample Nos. 1-3, 7-9 are samples in Example 1 of the present specification. Sample Nos. C, D are inventive samples prepared in a similar manner to that of Sample Nos. 8, 9 in Experiment 1, respectively, except that the compounds (19) and (71) in the image forming layer were changed to compound (71) at same coating amount with respect to a total molar amount of the compounds (19) and (71).

Sample Nos. A, B are comparative samples prepared in a similar manner in that of Sample Nos. 8, 9 in Example 1 of the present specification except that the compounds (19) and (71) in the image forming layer were changed to 1-phenyl-3-pyrazolidone at the same coating amount with respect to a total molar amount of the compounds (19) and (71).

2. Evaluation and results

These photothermographic material samples were exposed, thermally developed and evaluated in the same manner as recited in Example 1 of the present specification.

(Sensitivity)

A sensitivity is defined as a reciprocal of an exposure value at which an optical density of fog+1.0 is obtained, and a sensitivity of the photothermographic material 1 is set to 100 and relative sensitivities were shown. A larger relative sensitivity value means a higher sensitivity.

(Fog)

Fog is indicated by the density of the unexposed part.

(Raw stock storability)

Each sample hermetically sealed with the packaging material described above was exposed and thermal developed after purposely preserving it at 45°C for 7 days. The sensitivity change was measured by comparing the sample with a sample preserved by freezing.

Raw stock storability (sensitivity change) = (sensitivity of freeze preservation sample) - (sensitivity after purposely preserving at 45°C for 7 days)

(Print-out resistance)

Each sample after thermal development was left under a fluorescent lamp with an intensity of 200 lux in a room at 25°C and 70% RH. The increment of fog relative to the fog before leaving was measured.

The obtained results are shown in the following Table A.

By comparing sample Nos. 8, 9 with sample Nos. 2, 3, or sample Nos. C and D with sample Nos. 2, 3, respectively, sample Nos. 8, 9, C, D of the present invention resulted in high sensitivity while maintaining low fog and excellent image stability. Furthermore, Raw stock storability of the photothermographic material is unexpectedly improved by incorporation of the compound (71) or (71) and (19).

In contrast, by comparing sample Nos. A, B with sample Nos. 3, 5, respectively, comparative sample Nos. A, B resulted in no increase of sensitivity, but in increase of fog and degradation in image stability. It is clearly understood that 1-phenyl-3-pyrazolidone as a

molecule has no effect of the compound having an adsorptive group to silver halide and a 3-pyrazolidone group as a reducing group in a molecule.

Table A

Sample No.	Silver Halide Emulsion		Compound having Adsorption Group and Reducing Group, or Comparative Compound	Development Accelerator		Sensitivity	Fog	Raw Stock Storability (Sensitivity Variation)	Print-out Resistance	Remarks
	No	AgI Content (mol%)		Compound No	Addition Amount (mol/mol Ag)					
1	A1	100	—	—	—	100	0.16	20	0.03	Comparative
2	A1	100	—	No. 1-68	2×10^{-3}	120	0.17	15	0.03	Comparative
3	A1	100	—	No. 6-41	2×10^{-3}	120	0.17	15	0.03	Comparative
7	A2	100	(19) and (71)	—	—	110	0.16	18	0.03	Comparative
8	A2	100	(19) and (71)	No. 1-68	2×10^{-3}	195	0.17	7	0.03	Inventive
9	A2	100	(19) and (71)	No. 6-41	2×10^{-3}	193	0.17	7	0.03	Inventive
A	A2'	100	1-phenyl-3-pyrazolidone	No. 1-68	2×10^{-3}	121	0.27	17	0.09	Comparative
B	A2'	100	1-phenyl-3-pyrazolidone	No. 6-41	2×10^{-3}	118	0.24	19	0.08	Comparative
C	A2''	100	(71)	No. 1-68	2×10^{-3}	194	0.17	8	0.03	Inventive
D	A2''	100	(71)	No. 6-41	2×10^{-3}	196	0.16	7	0.03	Inventive

Emulsion Nos. A2', A2'' are some in their silver halide composition, except that A2' contains 1-phenyl-3-pyrazolidone, and A2'' contains compound (71).

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: August 7, 2007

Tomoyuki Ohzeki
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